

Abstract

A laser imaging system with reduced speckle is disclosed. The laser imaging system includes spatially superpositioned 1-D arrays or alternatively 2-D arrays of independent emitters of laser radiation, with each emitter having a spectral bandwidth $\Delta\lambda_i$ centered at some arbitrary wavelength λ_{0i} . The elements of the array are allowed, by

5 $\Delta\lambda_i$ centered at some arbitrary wavelength λ_{0i} . The elements of the array are allowed, by design, to have a slightly different central wavelength, thereby creating an ensemble bandwidth $\Delta\Lambda$ which is much greater than the bandwidth $\Delta\lambda_i$ of any individual emitter in the array. The resulting increased bandwidth reduces speckle in a displayed image.

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